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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/779,435	02/09/2001	Tomohisa Arai	017447/0171	6673
22428	7590	03/17/2004	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			SHEEHAN, JOHN P	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 03/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/779,435

Applicant(s)

ARAI ET AL.

Examiner

John P. Sheehan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-13, 23-26, 33, 35 and 37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-13, 23-26, 33, 35 and 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 to 8, 10 to 13, 23 to 26, 33, 35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwata et al. (Iwata, US Patent No. 5,800,728).

Iwata teaches an iron-rare earth permanent magnet composition having the composition;

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wherein R represents at least one element selected from the group consisting of Y, Th and the lanthanide elements;

M represents at least one element selected from the group consisting of Ti, Cr, V, Zr, Nb, Al, Mo, Mn, Hf, Ta, W, Mg, H, Sn, Ge and Ga;

the elements are present in atomic percentages indicated by a, b, c, d, e, f, g and h, wherein $a+b+c+d+e+f+g+h=100$ atomic %; and further,

$$3 \leq b \leq 30$$

$$0 \leq c \leq 30$$

$$0 \leq d \leq 50$$

$$0 \leq e \leq 50$$

$$0 \leq f \leq 50$$

$$\text{provided that } 0.3 \leq d+e+f \leq 50$$

$$0 \leq g \leq 50 \text{ and}$$

$$0 \leq h \leq 30.$$

(See column 2, lines 5 to 23) wherein the nitrogen is present as an interstitial element (column 3, lines 28 and 29). Iwata also discloses a method of making the claimed composition that is similar to, if not the same as, applicants' method of making the claimed composition (compare the specification, pages 10 to 12 to Iwata's Example 1).

It is noted that the proportions of Iwata's composition are in atomic percents whereas the proportions of applicants' claimed composition are not in atomic percent. In view of this, the Examiner has converted the proportions of the claimed composition into atomic percents using the following method:

when $x = 0.5$ and $z = 1.4$ then

$$R(T0.5M0.5)1.4 = RT0.7M0.7$$

$$\text{Atomic \% R} = \frac{1}{0.7 + 0.7 + 1} \times 100 = 41.7 \text{ at\%}.$$

Following this method using the following combinations of x and z subscripts

$$x = 0.5 \text{ and } z = 2.5$$

$$x = 1 \text{ and } z = 1.4 \text{ and}$$

$$x = 1 \text{ and } z = 2.5$$

resulted in the proportions;

R 28.6 to 41.7 at%

T 29.2 to 71.4 at% and

M 29.2 to 35.7 at%.

In view of these calculations it is clear that Iwata's composition overlaps applicants the applicants claimed composition.

Iwata and the claims differ in that Iwata does not teach the exact same proportions as recited in the instant claims, is silent with respect to the presence of nitrides in the disclosed composition and does not teach the Laves phase structure recited in claim 37.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the alloy proportions taught by Iwata overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

"The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages", In re Peterson 65 USPQ2d 1379 (CAFC 2003).

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Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Further, the claim language, "0 to 0.05 or less" (claim 1, the last line) encompasses 0% nitrides and thus the instant claims encompass the absence of a nitride.

With respect to the various properties recited in the claims, it is the Examiner's position that, Iwata's alloys overlap the alloy composition recited in the instant claims and which are made by a process which is similar to if not the same as applicants' process of making the instantly claimed alloy, therefore the Iwata's alloys would be expected to possess all the same properties as recited in the instant claims, including Laves phase structure recited in claim 37, In re Best, 195 USPQ, 430 and MPEP 2112.01.

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977)." see MPEP 2112.01.

Conclusion

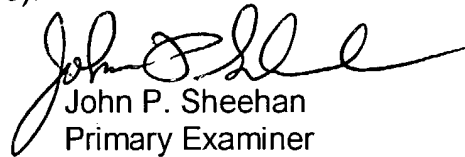
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571)

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272-1249. The examiner can normally be reached on T-F (6:45-4:30) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John P. Sheehan
Primary Examiner
Art Unit 1742

jps